

SUPPORT FOR THE AMENDMENTS

Support for the amendment to claim 46 is found in claim 55 as previously presented.

No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, claims 46-54, 56-58 will now be active in this application.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a food product of a cookie and/or a cookie dough containing a diacylglycerol oil and sodium stearoyl lactylate exhibiting improved emulsion stability and improved crumb softness.

Diglyceride oils have received interest as having beneficial health effects and are an oil which is not stored as fat. Baked goods containing oils typically rely on the formation of an oil-in-water emulsion at some stage of preparation. In the case of diglyceride containing compositions, hardness in storage or after some period of storage can be observed. This can be recognized by comparing the data in Tables E and I of applicant's specification comparing the properties of a shortening based cookie dough with a diglyceride based cookie dough.

TABLE E

Shortening:DAG oil = 100:0 25° C.				
Time (weeks)	AVG Sprd Fctr	Water Activity AVG	% H ₂ O AVG	Texture AVG
0	59.25	0.456	4.90	3141.12
1	54.11	*	*	4335.70
2	61.82	0.452	4.90	4593.97
4	55.14	0.487	4.40	4649.14
8	57.85	0.629	4.84	6662.71

TABLE I

Shortening:DAG oil = 0:100 25° C.				
Time (weeks)	AVG Sprd Fctr	Water Activity AVG	% H ₂ O AVG	Texture AVG
0	50.21	0.481	5.91	3286.24
1	49.56	*	*	3964.55
2	49.50	0.551	6.61	5367.29
4	50.89	0.591	6.35	8802.70
8	49.51	0.731	5.29	10982.63

The data demonstrates that use of a diglyceride reduced the average spread factor, increased the average water activity, increased the average %H₂O and increased the average Texture (e.g. firmer). Thus, techniques for forming stable oil-in-water emulsions of diglyceride containing compositions having good storage properties, especially in a cookie and/or a cookie dough are still sought.

The claimed invention addresses this problem by providing a cookie and/or a cookie dough comprising a diacylglycerol oil and sodium stearoyl lactylate. Applicant has discovered that sodium stearoyl lactylate provides for a diglyceride containing a cookie and/or a cookie dough having reduced hardness upon storage, a problem observed with diglyceride based cookie dough. A cookie and/or a cookie dough comprising a diglyceride oil and sodium stearoyl lactylate having reduced hardness and improved crumb softness is nowhere disclosed or suggested in the cited references of record.

The rejection of claims 1-10, 14-19 and 46-61 under 35 U.S.C. §103(a) over Goto et al. EP 0990391A in view of Gimelli et al U.S. 6,596,336, Daniels et al U.S. 6,447,831 and Widlak U.S. 6,387,433 is respectfully traversed.

None of the cited references suggest and enhanced performance by using sodium stearoyl lactylate in a cookie and/or cookie dough.

Goto et al. fail to disclose or suggest that a cookie and/or a cookie dough containing a diacylglycerol and sodium stearoyl lactylate would exhibit reduced hardness and improved crumb softness resulting from such a combination.

Goto et al. discloses an oil or fat composition as an emulsified oil-in-water type emulsion (example (1)) as well as baked cookies comprising a diacylglycerol, flour, sugar, egg, table salt, baking powder but no emulsifier (example 5)). There is no disclosure of the combination of diacylglycerol with sodium stearoyl lactylate or the reduced hardness and improved crumb softness resulting from such a combination.

As evidence of reduced hardness and improved crumb softness resulting from the combination of diacylglycerol and sodium stearoyl lactylate the examiner's attention is directed to Tables N, Q, T and W of applicant's specification in which spreadability, water activity, water percentage and texture on storage was evaluated for diglyceride based cookie dough containing different emulsifiers.

TABLE N

1% Deoiled Lecithin (Ultralec) w/DAG oil				
Time (weeks)	AVG Sprd Fctr	Water Activity AVG	% H ₂ O AVG	Texture Mean AVG
0	55.84	N/A	N/A	2550.81
1	59.39	N/A	N/A	2816.06
2	56.10	0.543	6.33	3899.75
4	60.20	0.590	6.21	6103.99
8	55.76	0.650	6.69	7467.44

TABLE Q

1% Triglyceryl Monostearate (Polyvaldo TGMS) w/DAG oil				
Time (weeks)	AVG Sprd Fctr	Water Activity AVG	% H ₂ O AVG	Texture AVG
0	49.50	N/A	N/A	2070.79
1	49.45	N/A	N/A	3993.66
2	47.91	0.580	4.31	4464.05
4	52.99	0.534	5.71	6537.88
8	49.05	0.662	5.06	10740.71

TABLE T

1% Decaglyceryl Monostearate (Polyvaldo 10-1-S) w/DAG oil				
Time (weeks)	AVG Sprd Fctr	Water Activity AVG	% H ₂ O AVG	Texture AVG
0	56.81	N/A	N/A	1942.24
1	58.15	N/A	N/A	2619.33
2	56.98	0.509	6.21	3867.50
4	56.39	0.531	5.45	4296.77
8	59.13	0.679	4.64	6865.97

TABLE W

1% SSL w/DAG oil				
Time (weeks)	AVG Sprd Fctr	Water Activity AVG	% H ₂ O AVG	Texture AVG
0	56.89	N/A	N/A	1723.16
1	59.09	N/A	N/A	2716.84
2	57.13	0.492	5.72	2517.82
4	60.83	0.508	6.09	3225.82
8	63.00	0.605	4.43	5415.62

The data from tables N, Q, T and W demonstrate that while each of lecithin, triglyceryl monostearate, decaglyceryl monostearate and sodium stearoyl lactylate were effective at reducing hardness, sodium stearoyl lactylate was most effective at reducing hardness. Since Goto et al., the only reference to describe a diglyceride containing composition, does not describe the use of sodium stearoyl lactylate, and applicant has

provided evidence of a result not suggested by the cited art of an enhanced performance resulting from selection of sodium stearoyl lactylate as compared with known emulsifiers, the claimed invention in which sodium stearoyl lactylate is used in a diglyceride containing cookie or cookie dough is not obvious.

Gimelli et al. has been cited for the use of sodium stearoyl lactylate as an emulsifier for a concentrate sauce (column 3, lines 53-64). There is no disclosure of cookies or cookie dough, and therefore no suggestion of reduced hardness in a cookie or cookie dough.

Daniels et al. has been cited for a disclosure of a spreadable product or frying medium containing sodium stearoyl lactylate as an emulsifier. The reference fails to identify a cookie or cookie dough containing sodium stearoyl lactylate.

Widlak describes a fluid emulsified shortening composition **for use in yeast-raised** food processing (column 1, lines 12-17). The combination of one or more edible salts of stearoyl lactylate or diacetic tartaric acid esters of monoglycerides, one or more monoglycerides, lecithin and a liquid edible oil, when added at about 3% to the weight of flour, and wherein the weigh ratio of the oil to the sum of the three emulsifiers is between 4:1 and 1:1, will produce **bread** which has a softer crumb texture and greater loaf volume than bread made using common commercial practices (column 3, lines 56-64). It is known that bread has a high water content, about 40%, wherein cookies have a water content of only about 5%. Thus, it is clear that Widlak describes suitability of a combination of emulsifiers for leavened bread products, and does not suggest any particular result from the use of sodium stearoyl lactylate in a cookie or cookie dough.

In contrast, the claimed invention is directed to a cookie or cookie dough based on a diglyceride composition containing sodium stearoyl lactylate and realized a reduction in hardness and enhanced cookie crumb softness resulting from the use therein.

Since none of the cited references suggest a reduced hardness and enhanced crumb softness for a cookie or cookie dough based on diglyceride containing sodium stearoyl lactylate, the claimed invention would not have been obvious over the cited reference and withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

Moreover, the examiner's attention is directed to page 6, paragraph 0023 and page 36, paragraph 0078 which identify improved crumb softener properties for the combination of SSL and diglyceride. Such statements **must be treated as objectively true**, unless the examiner has reasons, based on sound scientific principles, to doubt the objective truth of applicant's specification.

The burden is on the Patent Office to provide reasons based on scientific principles, to doubt the objective enablement of Applicant's claimed invention. Applicant's disclosure **must be taken as in compliance** with the enabling requirement under 35 USC 112, first paragraph, unless, there is reason to doubt the objective truth of the statements contained therein. (*In re Marzocchi*, 169 USPQ 367, 369 (CCPA 1971)).

Thus, applicant's disclosure and demonstration is believed to be commensurate in scope with the claimed invention.

Page 4 of the official action suggest that improved emulsion stability and crumb softness is inherent to the Goto et al composition. Since Goto et al merely describe the use of a generic emulsifier in the formation of an oil-in-water emulsion, there is no suggestion that SSL in combination with a diglyceride oil would provide reduced harness and enhanced crumb softness. Applicant has already demonstrated reduced hardness and enhanced crumb softness relative to other emulsifiers such that applicant's observation of reduced hardness and enhanced crumb softness is not suggested by the cited reference. Withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

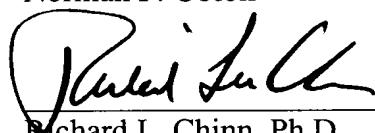
The rejection of claims 15 and 57 under 35 U.S.C. 112, second paragraph has been obviated by appropriate amendment.

Applicant has now amended claim 57 to make clear that the flour has a protein content of greater than about 8%. The identification of the protein content of the flour is supported by applicant's disclosure at paragraph [0082]. Claim 58, has been similarly amended. In view of applicant's amendment, withdrawal of this ground of rejection is respectfully requested.

Applicant submits that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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